

**Before the  
Federal Communications Commission  
Washington, D.C. 20554**

In the Matter of	)	
	)	
Iridium Constellation LLC	)	File No. SAT-MOD-19990303-00021
	)	Call Sign S2110
Iridium Satellite LLC	)	
Iridium Carrier Services	)	File No. SES-LIC-19960116-01966/01967
	)	Call Sign E960132
Modification of Authority to	)	Call Sign E960131
Operate a Mobile Satellite System in the	)	
1.6 GHz Frequency Band	)	

**ORDER**

**Adopted: September 2, 2004**

**Released: September 3, 2004**

By the Deputy Chief, Satellite Division, International Bureau:

**I. INTRODUCTION AND BACKGROUND**

1. By this Order we modify the authorizations of Iridium Constellation LLC, Iridium Satellite LLC, and Iridium Carrier Services (collectively Iridium) to operate space and earth stations in the "Big LEO" mobile-satellite service (MSS).<sup>1</sup> Specifically, this Order authorizes Iridium to use an additional 3.1 megahertz of spectrum on a shared basis with other operators in the 1618.25-1621.35 MHz band. This Order is issued pursuant to authority delegated in the Commission's recently released *Big LEO Spectrum Sharing Order*.<sup>2</sup>

2. In October 1994, the Commission issued the *Big LEO Order* establishing licensing and service rules for non-geostationary satellite orbit (NGSO) MSS operations in the 1610-1626.5 MHz and 2438.5-2500 MHz bands.<sup>3</sup> Pursuant to the *Big LEO Order*, Iridium's predecessor-in-interest, Motorola Satellite Communications, Inc., was authorized to operate both uplink and downlink transmissions in the 1621.35-1626.5 MHz frequency band using time division multiple access (TDMA).<sup>4</sup> One other entity,

<sup>1</sup> "Big LEO" refers to low-Earth orbit (LEO) mobile satellite services above 1 GHz.

<sup>2</sup> Review of the Spectrum Sharing Plan Among Non-Geostationary Satellite Orbit Mobile Satellite Service Systems in the 1.6/2.4 GHz Bands, IB Docket No. 02-364, Amendment of Part 2 of the Commission's Rules to Allocate Spectrum Below 3 GHz for Mobile and Fixed Services to Support the Introduction of New Advanced Wireless Services, including Third Generation Wireless Systems, ET Docket No. 00-258, *Report and Order, Fourth Report and Order and Further Notice of Proposed Rulemaking*, FCC 04-134 (2004) (*Big LEO Spectrum Sharing Order*).

<sup>3</sup> Amendment of the Commission's Rules to Establish Rules and Policies Pertaining to a Mobile Satellite Service in the 1610-1626.5/2483.5-2500 MHz Frequency Bands, *Report and Order*, 9 FCC Rcd 5936 (1994) (*Big LEO Order*), *modified on recon.*, 11 FCC Rcd 12861 (1996).

<sup>4</sup> Motorola Satellite Communications Inc., *Order and Authorization*, 10 FCC Rcd 2268 (Int'l Bur. 1995), *corrected*, 10 FCC Rcd 3925 (1995), *affirmed in part and modified*, 11 FCC Rcd 18502 (1996). In 2002, the Iridium space-station license and associated earth-station licenses were assigned to Iridium Satellite LLC and affiliated companies pursuant to a bankruptcy sale. *See Applications of Space Station System Licensee, Inc., Assignor, and Iridium* (continued....)

New Operating Globalstar, LLC (Globalstar), is also licensed to provide Big LEO MSS service using the 1610-1621.35 MHz and 2483.5-2500 MHz frequency bands for uplinks and downlinks, respectively.<sup>5</sup> Globalstar operates using code division multiple access (CDMA).

3. On July 16, 2004, the Commission adopted a revised band sharing plan in the *Big LEO Spectrum Sharing Order*. Among other things, the revised plan allows TDMA MSS operators to coordinate use of the 1618.25-1621.35 MHz band with CDMA MSS operators on a co-primary basis in the uplink direction, and on a secondary basis in the downlink direction. The Commission found that the revised plan would promote spectral efficiency and noted that Globalstar and Iridium had demonstrated the ability to share a portion of the 1.6 MHz band without undue interference.<sup>6</sup> Moreover, the Commission stated that licensees should be able to coordinate with minimal Commission intervention.<sup>7</sup> Accordingly, the Commission directed the International Bureau to modify Iridium's license to allow access to the additional 3.1 megahertz in the 1618.25-1621.35 MHz band.<sup>8</sup>

## II. DISCUSSION

4. As directed in the *Big LEO Spectrum Sharing Order*, we modify Iridium's satellite authorization to allow Iridium to operate in the 1618.25-1621.35 MHz band, subject to the terms and conditions established in the *Big LEO Spectrum Sharing Order*. In addition, we modify Iridium's mobile earth terminal authorizations to allow operations in the 1618.25-1621.35 MHz band. The effective date of the *Big LEO Spectrum Sharing Order*, adopting the spectrum sharing plan in the Big LEO bands, is September 8, 2004.<sup>9</sup> Therefore, this modification to Iridium's Big LEO MSS authorizations is effective on September 8, 2004.

## III. ORDERING CLAUSES

5. Accordingly, IT IS ORDERED, pursuant to Section 316 of the Communications Act, 47 U.S.C. § 316, that the space station license held by Iridium Constellation LLC, and the associated blanket mobile earth terminal licenses held by Iridium Carrier Services and Iridium Satellite LLC, ARE MODIFIED to permit the Iridium Big LEO MSS satellites and mobile earth station terminals to transmit with a TDMA protocol in the 1618.25-1621.35 MHz band, on a shared, co-primary basis for uplink transmission and on a secondary basis for downlink transmission, subject to the terms and conditions set forth in the Review of the Spectrum Sharing Plan Among Non-Geostationary Satellite Orbit Mobile

---

(...continued from previous page)

Constellation LLC, Assignee, *et al.*, *Memorandum Opinion, Order and Authorization*, 17 FCC Rcd 2271 (Int'l Bur. 2002).

<sup>5</sup> Loral/Qualcom, L.P., Authority to Construct, Launch and Operate Globalstar, a Low Earth Orbit Satellite System to Provide Mobile Satellite Services in the 1610-1626.5 MHz/2483.5-2500 MHz Bands, *Order and Authorization*, 10 FCC Rcd 2333 (Int'l Bur. 1995), *corrected*, 10 FCC Rcd 3926 (1995), *affirmed in part and modified*, 11 FCC Rcd 18502 (1996). Three other entities were licensed for CDMA MSS systems using the 1610.-1621.35 MHz band for service uplinks and 2483.5-2500 MHz band for service downlinks. These systems, proposed by TRW, Inc., Mobile Communications Holdings, Inc., and Constellation Communications, Inc., were never implemented and the licenses are no longer in force. *See Big LEO Spectrum Sharing Order*, p. 10 at ¶¶ 20-21.

<sup>6</sup> *Big LEO Spectrum Sharing Order* p. 22, at ¶ 45 and p. 25 at ¶ 53.

<sup>7</sup> *Big LEO Spectrum Sharing Order*, p. 25 at ¶ 53.

<sup>8</sup> *Id.* p. 40 at ¶ 88. The Commission stated that Globalstar's license did not need to be modified because it would still have access to spectrum assigned in its initial authorization. The Commission also addressed and rejected arguments that the hearing requirements of Sections 312 and 316 of the Communications Act, 47 U.S.C. §§ 312, 316, apply to this proceeding. *Id.*, p. 36 at ¶¶ 80-89.

<sup>9</sup> 69 Fed. Reg. 41857 (2004).

Satellite Service Systems in the 1.6/2.4 GHz Band, IB Docket No. 02-364, Amendment of Part 2 of the Commission's Rules to Allocate Spectrum Below 3 GHz for Mobile and Fixed Services to Support the Introduction of New Advanced Wireless Services, including Third Generation Wireless Systems, ET Docket No. 00-258, *Report and Order, Fourth Report and Order and Further Notice of Proposed Rulemaking*, FCC 04-134 (2004).

6. IT IS FURTHER ORDERED that this modification to Iridium Constellation, LLC's Big LEO MSS authorization, File No. SAT-MOD-19990303-00021 (S2110) and associated mobile earth station authorizations, File Nos. SES-LIC-19960116-01966 (E960131), SES-LIC-19960116-01967 (E960132), is effective September 8, 2004.

FEDERAL COMMUNICATIONS COMMISSION



Cassandra C. Thomas  
Deputy Chief  
Satellite Division  
International Bureau